

**REMARKS**

The Official Action mailed July 27, 2010, and the references relied upon therein have been carefully reviewed. Reconsideration and allowance of the claims are requested in view of the foregoing amendments and the following remarks.

**I. Claim Status and Amendments**

Claims 1, 3, 8, 9, 12, and 15 are present in this application and stand rejected.

By way of the present amendment, claim 1 has been amended, in a non-narrowing manner, to address the formal matters raised in the Office Action. Such revisions are unrelated to patentability. The revisions are non-substantive and they are not intended to narrow the scope of protection. In particular, claim 1 has been amended to replace the phrase "and other  $\alpha$ -glycosyl  $\alpha,\alpha$ -trehalose" with "and  $\alpha$ -glycosyl  $\alpha,\alpha$ -trehalose as other components." Support can be found in the specification, as filed; see for example, the sentence bridging pages 11 and 12 (paragraph 0019 of US 2006/0177553 A1). No new matter has been added.

Claims 1, 3, 8, 9, 12, and 15 are pending upon entry of this amendment, and these claims define patentable subject matter warranting their allowance for the reasons discussed herein.

## **II. Written Description Rejection**

Claim 1 has been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement for the reasons set forth in item 2 on page 2 of the Office Action. The examiner contends that there is no support in the originally filed specification for the limitation of "and other  $\alpha$ -glycosyl  $\alpha,\alpha$ -trehalose" in light of pages 11 and 12 of the specification.

In response thereto, Applicants have amended claim 1 to remove the objected language and to specify "and  $\alpha$  - glycosyl  $\alpha,\alpha$ -trehalose as other components." The added language is literally described at page 12, lines 1-2. It is therefore believed that the present amendment overcomes the rejection. Withdrawal of the rejection is therefore requested.

## **III. Obviousness Rejections**

Claims 1, 3, 8, 9, 12 and 15 have been rejected under 35 USC 103(a) as being unpatentable over Hasegawa (JP 09-187249), in view of Aga et al. (U.S. Patent No. 5,922,324) and further in view of Maruta et al. (U.S. Patent No. 5,610,047) for the reasons set forth in items 6-19 on pages 3-9 of the Office Action. The rejection is respectfully traversed.

The examiner states that Hasegawa teaches combining a functional material such as propolis with trehalose and powderizing the resulting mixture, and that Aga et al. teaches that propolis is a hydrophobic ingredient and is a non-saccharide ingredient. Based on this, the Examiner contends that it would have been obvious to one of ordinary skill in the art at the time that the invention was made, for the propolis of Hasegawa to have been processed into a liquid or paste form by adding alcohol or organic solvent, prior to combining with the trehalose and powderizing the resulting mixture.

The examiner further cites Maruta et al. and asserts that it would have been obvious to one of ordinary skill in the art at the time that the invention was made, for the method of powderizing a non-saccharide ingredient such as the propolis extract of Hasegawa in view of Aga to have further comprised substituting the claimed saccharide derivative of Maruta for the trehalose of Hasegawa in view of Aga. Applicants respectfully disagree.

As mentioned below, there is nothing in either Hasegawa, Aga, or Maruta that teaches a method for powderizing a hydrophobic non-saccharide ingredient(s) as defined in claim 1.

First, step (B) of independent claim 1 calls for "mixing said hydrophobic non-saccharide ingredient(s) with a saccharide derivative(s) of  $\alpha,\alpha$ -trehalose." However, what is used in Hasegawa is not a saccharide derivative of  $\alpha,\alpha$ -trehalose, but rather just a  $\alpha,\alpha$ -trehalose. There is nothing in Hasegawa that teaches or suggests that a saccharide derivative of  $\alpha,\alpha$ -trehalose should be used or can also be used to powderize a functional material such as propolis. Thus, Hasegawa never uses or suggests using a saccharide derivative of  $\alpha,\alpha$ -trehalose.

The secondary reference of Aga et al. and Maruta fail to remedy the above-noted deficiencies in Hasegawa.

Similar to Hasegawa, Aga et al. mentions nothing about a saccharide derivative of  $\alpha,\alpha$ -trehalose. In particular, there is nothing in Aga et al. that teaches or suggests powderizing a functional material, such as propolis, with a saccharide derivative of  $\alpha,\alpha$ -trehalose in an amorphous form.

For these reasons, it should be clear that combining Hasegawa and Aga et al. does not lead a skilled person to using a saccharide derivative of  $\alpha,\alpha$ -trehalose, as required in the method of independent claim 1. Thus, claim 1 is believed to be novel over the combination of Hasegawa and Aga et al.

Lastly, the secondary reference of Maruta fails to remedy the above-noted deficiencies in Hasegawa and Aga et al.

Though Maruta discloses saccharide derivatives of  $\alpha,\alpha$ -trehalose, it is not a saccharide derivative of  $\alpha,\alpha$ -trehalose in an amorphous form, as required in claim 1. Instead, Maruta only teaches the use of a crystalline trehalose to powderize other ingredients. The examiner's attention is invited to the description in Maruta at column 11, lines 61-65, where it is described as follows:

Anhydrous crystalline trehalose can be arbitrarily used as a desiccant for food products, cosmetics, pharmaceuticals, and their materials and intermediates, and can readily be formed into compositions in the form of powder, granule and tablet with a satisfactory stability and quality.  
[Emphasis added.]

Also, the examples of powdery products in Maruta do not use a saccharide derivative of  $\alpha,\alpha$ -trehalose in an amorphous form, but instead they use a crystalline trehalose (i.e. Example B-11 (Powdery peptide) and Example B-12 (Powdery egg yolk)).

With respect to a saccharide derivative of  $\alpha,\alpha$ -trehalose, Maruta teaches powderizing a saccharide derivative of  $\alpha,\alpha$ -trehalose *per se* by spray drying.

However, there is nothing in Maruta that discloses or suggest the use of a saccharide derivative of  $\alpha,\alpha$ -trehalose for powderizing other materials. Please see, Example B-1

(Sweetener) and Example B-6 (Powdered Juice), in which a saccharide derivative of  $\alpha,\alpha$ -trehalose which has been in powder form is mixed with other materials in powder form.

Yet, the examiner states that Maruta further teaches that the method for incorporating the present non-reducing saccharides, relatively low reducing saccharides containing them and/or trehalose prepared from these saccharides into the above mentioned composition include conventional methods of mixing, kneading, dissolving, melting, soaking, coating, spraying, crystallizing and solidifying (see page 7, lines 9-13 of the Office Action). Applicants respectfully disagree and submit that Maruta fails to disclose or suggest that for which it is being offered.

In fact, the part of Maruta relied upon by the examiner just discusses methods for incorporating the saccharides into a composition. It never discloses or suggests that the saccharides can be used by being mixed with other ingredients to be spray dried.

Thus, it is believed that there is nothing in Maruta that teaches or suggests the use of a saccharide derivative of  $\alpha,\alpha$ -trehalose to powderize a hydrophobic non-saccharide ingredient(s).

By contrast, according to the claimed method for powderizing a hydrophobic non-saccharide ingredient(s),

powdery products having a satisfactory moisture-retaining activity but no hygroscopicity can be obtained suppressing the reducing of their relish, such as original flavor or color, and suppressing deterioration of quality such as inactivation of effective components (please see the paragraph bridging pages 3 and 4 of the specification).

For these reasons, claim 1 is believed to be novel and non-obvious over the combination of Hasegawa, Aga et al. and Maruta et al. Claims 3, 8, 9, and 12, all of which depend on claim 1, are also believed to be novel and non-obvious over the combination of Hasegawa, Aga et al. and Maruta et al.

Thus, the obviousness rejection of claims 1, 3, 8, 9, and 12 over Hasegawa, Aga et al. and Maruta et al. is untenable and should be withdrawn.

Claims 1, 3, 8, 9, 12 and 15 have been rejected under 35 USC 103(a) as being unpatentable over Roser et al. (U.S. Patent Application No.2002/0012687) in view of Maruta et al. (U.S. Patent No.5,610,047) for the reasons set forth in items 20-31 on pages 9-16 of the Action. The rejection is respectfully traversed.

The examiner states that Roser is deemed to teach processing the hydrophobic non-saccharide ingredient into a liquid or paste form by adding alcohol or organic solvent and mixing the hydrophobic ingredient with trehalose, and that

Roser further teaches spray drying the composition, thus powderizing it.

Based upon this, the examiner contends that it would have been obvious to one of ordinary skill in the art at the time that the invention was made, for the method of powderizing a non-saccharide ingredient of Roser to have further comprised substituting the claimed saccharide derivative of Maruta for the trehalose of Roser. Applicants respectfully disagree and submit that Roser and Maruta fail to disclose or suggest that for which they are being offered.

Similar to Hasegawa and Aga et al., there is nothing in Roser that teaches or suggests the use of a saccharide derivative of  $\alpha,\alpha$ -trehalose for powderizing a hydrophobic non-saccharide ingredient(s). Also, as discussed above, there is nothing in Maruta that teaches or suggests the use of a saccharide derivative of  $\alpha,\alpha$ -trehalose to powderize a hydrophobic non-saccharide ingredient(s). The above arguments with respect to Maruta are reiterated herein by reference.

It is therefore believed that the method of claims 1, 3, 8, 9, and 12 are not obvious over the combination of Roser et al. in view of Maruta et al. The obviousness rejection of claims 1, 3, 8, 9, and 12 over Roser et al. in view of Maruta et al. is untenable and should be withdrawn.



IV. Conclusion

Having addressed all the outstanding issues, this paper is believed to be fully responsive to the Office Action. It is respectfully submitted that the claims are in condition for allowance, and favorable action thereon is requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact the undersigned attorney at the telephone number below.

Respectfully submitted,  
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